# GE Silicones, LLC

EPA ID Number: NYD002080034

## Other (Former) Names of Site

General Electric Company Silicone Products

## Site Description

GE Silicones, LLC (GE) owns and operates a large silicone manufacturing facility onan 800-acre site in the Town of Waterford, Saratoga County, New York. The facility is located approximately 2 miles north of the Village of Waterford along Routes 4 and 32. GE manufactures and markets silicone products from basic raw materials to a wide variety of finished products. Hazardous and nonhazardous waste is generated at this site as a result of these manufacturing processes. The facility is only permitted to manage hazardous waste generated at this site.

There are 70 active and inactive solid waste management units, including five closed surface impoundments, three Resource Conservation and Recovery Act (RCRA) permitted landfills (Numbers 1, 3 and 6), two solid waste landfills, industrial sewer lines, and closed underground storage tanks on the site. Currently, only Landfill 6, two container storage areas, and three storage tanks are in operation.

## Site Responsibility and Legal Instrument

The management of hazardous waste at this facility requires a NYS Part 373 Hazardous Waste Management permit. There was also a New York State consent decree issued to GE in 1987, addressing groundwater contamination at the site, which was later included into the final Corrective Measures implemented at the site.

## Permit Status

A Resource Conservation and Recovery Act (RCRA) permit was originally issued in 1989 and renewed in 1999. It authorizes the facility to store hazardous waste in tanks and containers, operate two hazardous waste incinerators and operate a hazardous waste landfill.

## Potential Threats and Contaminants

There have been hazardous waste releases from the landfills, sewer system, underground storage tanks, and the manufacturing areas. As a result, soil and groundwater have been contaminated on-site and off-site. The primary hazardous wastes currently generated at, and contaminating, this facility are volatile organic

compounds and chlorinated hydrocarbons, associated with the silicone manufacturing operations. Contaminated groundwater flows through layers of glacial till and bedrock to the east toward the Hudson River, however the plume has been contained on-site. There is also a plume moving toward the southern boundary of the facility. Currently, this plume is contained on-site but has the potential to move off-site.

Risks to human health and the environment from chemicals in the soil and groundwater are controlled at this facility. The Occupational Safety and Health Administration (OSHA) guidelines have been followed in establishing the facility's health and safety plan; the groundwater is not being used for drinking purposes on-site or off-site. There is no potential exposure to contaminated soil because all contaminated soils have been removed.

Measurements of indoor air in nearby residential areas demonstrate that volatilization of hazardous constituents from the groundwater is not a public health problem off-site. GE also conducted a human and ecological risk assessment in August 2001. The risk assessment indicated that on-site exposure to indoor air was not a concern since no volatile contaminant plumes were present beneath occupied buildings.

**Cleanup Approach and Progress**

The final Corrective Measures under the facility's Resource Conservation and Recovery Act (RCRA) permit required GE to:

- Install groundwater recovery wells and additional monitoring wells in each of nine designated areas;
- Operate each of the groundwater recovery systems to create a hydraulic barrier and to attain specified cleanliness standards and guidelines;
- Treat and discharge the extracted groundwater into the Hudson River through existing Outfalls 001 and 002 in compliance with GE's New York State Pollutant Discharge Elimination System (NYSPDES) permit;
- Monitor the performance of the groundwater recovery systems.

The areas selected for installation of the groundwater recovery systems were located to prevent the groundwater contaminant plume from moving off-site. Currently, contaminated groundwater is treated on-site in a wastewater treatment plant, then discharged into the Hudson River.

The monitoring data indicate that groundwater quality at the facility has improved considerably since the remedial system was implemented in 1988. By 2001, the contaminant concentration in the majority of the wells adjacent to the Hudson River were at or near drinking water quality. The remediation program has achieved its design objectives of removing the concentration of site-specific hazardous constituents in the groundwater by 75 percent in ten years, and should ultimately result in restoration of the aquifer beneath the facility.

GE has also implemented source control measures by removing a substantial number of underground chemical storage tanks, excavating the surrounding contaminated soils, and excavating its industrial sewer system.

In 1991, the State determined that corrective measures were needed at Landfill 1. Subsequently, GE set up three groundwater recovery wells at the down-gradient boundary of Landfill 1.

Finally, GE has been conducting quarterly monitoring of Mudderkill Creek, a small stream located on the north side of the facility. In the past, this creek has been impacted by infiltration of contaminated groundwater from the vicinity of Landfill 3. Corrective Measures will be required if significant concentrations of volatile organic compounds are observed in the creek, but so far measured levels have been very low (2.0 - 20.0 parts per billion).

**Site Repository**

Copies of supporting technical documents and correspondence cited in this site fact sheet are available for public review at:

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
Bureau of Radiation & Hazardous Site Management
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